



FEMA

Concrete Portables More Durable, Cost Effective

West Palm Beach, FL - Florida school systems often rely on portable classrooms to ease overcrowded schools. Typically constructed of inexpensive materials that are quickly assembled, traditional portables are easily damaged during severe weather. With concerns from parents and students about the poor design of traditional portables, concrete units are being explored as a safer, cost-effective, and more durable option.

A new method of constructing portable classrooms is being utilized more frequently. Companies are developing more durable forms of construction, while maintaining the advantages of portability.

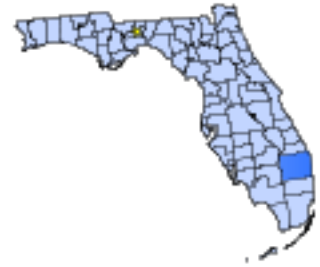
Some designs incorporate concrete and steel. Wall panels with embedded plates are welded together and a composite beam runs through the middle portion of the building at the seam. This reinforces the roof and supports the center of the classroom. The roof is also made of concrete, which is rated to withstand winds of 187 mph and includes a waterproof membrane. The concrete is composed of a reactive waterproof mixture, which crystallizes and re-seals itself when exposed to water infiltration.

In many cases, the concrete portables are designed and built in a factory setting. This allows for a greater degree of quality control. It takes an average of 30 days to build a unit, and then the portables are delivered to the site. After that, it takes only another day or two to install them.

In the past, due to the temporary nature of portables, more attention was paid to cost-effectiveness rather than sturdiness or longevity. While this reduced the initial cost of portables, the constant need to replace them after each hurricane season caused long-term expenditures to increase dramatically.

"I've worked with all the different kinds of portables," said Dennis McCabe, maintenance supervisor for the School District of Palm Beach County. "I think the concrete portables are the best. There's very little maintenance and when a storm comes through, the other portable types are destroyed. With these new portables, there's no damage."

Several companies have begun exploring expanding portable design into the residential market. The inherent strength of the structure and variety of design options make the portables ideal for use in areas where housing needs are fluid. The expandability and portability allow homes to be moved and configured as necessary to conform to available space.



**Palm Beach County,
Florida**



Quick Facts

Sector:

Public

Cost:

\$150,000.00 (Estimated)

Primary Activity/Project:

Education/Outreach/Public Awareness

Primary Funding:

Private funds